



ENGINEERING, MANUFACTURING AND INDUSTRIAL TECHNOLOGY

A Quarterly Newsletter for Teachers and Students Focusing on Recent Events and Developments in the EMIT Pathway

Office of Career and Technical Preparation

January 2007

Welcome to the January (Happy New Year!) issue of the EMIT Newsletter, published by the Department of Labor & Economic Growth, Office of Career and Technical Preparation (OCTP). It is our desire to keep you informed about events and other useful information to help you as you navigate along the EMIT pathway. Past issues of this newsletter may be viewed at: http://www.michigan.gov/mdcd/0,1607,7-122-1680_2629_2724-101172--,00.html.

You are encouraged to review the information contained herein and pass it along to a colleague to whom it may be useful. If you are not receiving this newsletter via email and would like to do so, please take a minute and send us your email address.

Any ideas and/or suggestions should be addressed to Patricia Talbott, Engineering, Manufacturing & Industrial Technology Consultant, at (517) 335-0359 or talbott@michigan.gov.

Financial Aid for Students Seeking a Postsecondary Education

MICHIGAN ENGINEERING INCENTIVE

If you have students who are interested in a career in engineering or another high-tech occupation, they may want to investigate an initiative sponsored by the state of Michigan. Briefly, the program provides 0% interest on loans for those pursuing degrees in these fields. An indepth explanation of who qualifies and how to participate may be found by logging on to: www.michigan.gov/mistudentaid/0,1607,7-128-111860--00.html.

Other sites for programs sponsored by the state of Michigan for parents of students seeking financial aid may be found at the: Michigan Education Savings Program, www.misaves.com and the Michigan Education Trust, www.met4kid.com.

Resources for Instructors

In keeping with our desire to inform teachers about opportunities that will make their tasks easier, we recently investigated some excellent URLs that highlight links to a number of free and/or inexpensive resources that could be of use to all CTE instructors. Many of the links referenced are interactive. Also, as you search for help among the literally hundreds of web sources, do not forget to access the EMIT Resource List at: www.michigan.gov/documents/EMIT_ResourceList_167377_7.doc.



We highly recommend that you access a copy of *The Big Deal Book*. Among other things, this bi-annual publication points the way to a wide variety of information detailing funding sources, contest and rewards, professional development opportunities, and free resources. A subscription for the printed version is \$24.95/year but all of the information contained therein may be accessed for free by going online to: www.bigdealbook.com/cdwgk12. While visiting the site, register for their free newsletter updates.

The *Michigan Teacher Network* is a fantastic resource that was developed and is maintained by Michigan's public universities. Through the *Network*, you will be able to access literally thousands of excellent resources that have been evaluated by educators and other professionals as to their content, relevance, and ease of use. The MTN is well organized and is easy to browse the site for your area of interest. It is **completely free**.

and no registration is required. Visit the site at: <http://mtn.merit.edu/>.

As you continue your search for useful materials to aid in the preparation of your CTE classroom, another excellent website is: www.khake.com. Titled the “*Vocational Information Center*”, this website was developed by a retired Pennsylvania CTE teacher who found that a comprehensive listings of CTE resources were either difficult to find or nonexistent. She began to organize her favorite sites and that resulted in a resource book that rapidly became outdated. The content of this website is regularly updated. Among other things, there you will find **free** information and numerous links regarding: job descriptions and employment information, curricula and lesson plans, interactive help for math and the sciences, as well as many other helpful resources.

Renton Technical College, located in Renton, WA, has developed a 146 page document that provides examples of math used in construction classes regardless of the specific craft being taught. This document is not copyrighted and you are able to download those pages that pertain to the classes/crafts that you actually teach. Visit: www.rtc.edu/CommunityResources/CCE/MATHBOOK1017.A.pdf.

Another great site intended to reduce your legwork as you search for ways to become a more effective educator is: www.techtrekers.com. The site contains numerous hot links to free information and materials to assist you and your students in reaching their goals.

Other Sites of Interest

The American Mathematical Society will lead you to everything you ever wanted to know about math. <http://www.ams.org>.

Fun site for helping students with math problems. Nicely designed and linked to many interactive websites. www.coolmath.com.

Links to websites that help with virtually all academic subjects. www.homeworkspot.com.

“Facts” regarding science, history, math and much, much more. www.factmonster.com.

Construction Instructors

“Building Homes of Our Own” is an interactive CD for middle and high school classrooms intended to take the students through the entire process of building a home

from site selection to the actual sale. Students “collect information, solve problems, and make choices as they build a 3D model against a budget”. The free CD is being made available by the National Home Builders Association (NHBA) by logging onto their special website at: www.homesofourown.org.

CAD Instructors

In case you missed it last time, *Pro/Engineering CAD* software is being offered **free** to teachers and their students on a worldwide basis. We believe that this offer is just too good to pass on without your serious investigation. Please check out this amazing offer at: www.PTC.com/go/schools. As always, your feedback is important to us. Please contact us with your findings.



Small Engine Repair

Brigg & Stratton Company is offering a **free** small engine to schools that have an ongoing small engine repair program. Visit: www.thepowerportal.com to apply. Your ID is: voed_ed and you password is: briggs

Free Curriculum

There is a new site, www.teachengineering.org, for those educators seeking to meet the No Child Left Behind standards. This allows teachers to search for curriculum content based on a number of different criteria including keywords, grade levels, and educational standards. You will find many different lesson plans and hands-on activities supporting the lessons. It includes how long the activity takes, the grade level for which it was designed, the educational standards the activity meets, and details on the activity itself. Click on and try it out!

HVAC Excellence Conference

HVAC EXCELLENCE is a non-profit organization that was formed in 1994 to assist technicians in becoming the best that they can be within their chosen craft. They

are the only HVACR organization to meet the United States Federal Regulations for accrediting programs. They are holding their 1st Annual National Educator's Conference in Las Vegas, NV on March 25-27, 2007. Some available workshops are: Surviving Perkins Accountability, Standardized Testing, Programmatic Accreditation, Instructor Credentialing, and more. Visit: www.hvacexcellence.org for more information and to register.

Programs and Practices That Work

FIRST VEX Competition

FIRST (For Inspiration and Recognition of Science and Technology) is a nonprofit organization that is dedicated to making science, math, engineering, and technology entertaining and educational for high school students. The program's intent is to not only strengthen technological acumen but to also build self-confidence, leadership and life skills.

Founded in 1989, the Manchester, NH based organization sponsors events for teams of students, mentors, and other volunteers who come together to build robots that carry out specific tasks. The competitions began in 1992 with 28 teams being registered. Last year, over 1,000 teams participated in 33 regional events from countries around the world. That equated to over 130,000 student participants!

Last year the *First* organization instituted the VEX (FVC) competition that is intended to reach a larger audience of high school students by making their kits more readily available and more affordable. The program teams design, build and programs robots; apply real-world math and science concepts; and, develop problem solving, organizational, and team building skills.

For additional information and/or to enroll a team, visit them at: www.usfirst.org/.

Girls in Technology

Recent studies indicate that young girls enjoy math, science, and technology as much as their male counterparts. Despite this, by the eighth grade, there are twice as many boys who show an interest in these subjects. This has resulted in only 22% of all engineers and scientists being women, even though nearly half the workforce is female.

As educators, we have a wonderful opportunity to help young girls see how important these subjects are in the world around them and the careers that may result from the study of them. An interactive website that will help you and your students to a heightened awareness is:

www.girlsgotech.org

Automotive Applied Academics

If you need to know which academic skills are necessary to achieve proficiency at any specific automotive task, the National Automotive Technician Education Foundation (NATEF) has published three manuals that may be of assistance. Automobile, Collision Repair, and Medium/Heavy truck Academics Manuals will provide guidance, complete with crosswalks and definitions that list each related academic skill. These manuals may be purchased or they may be accessed FREE by logging on to: http://www.natef.org/applied_academics.cfm.

Questions, comments, and/or suggestions regarding this newsletter, should be addressed to Patricia Talbott
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